

# Welcome to the 2021 Online HYSPLIT Workshop (DAY 4 of 4)

The broadcast is scheduled to start at:  
09:00 Eastern Daylight Time (EDT) = 13:00 UTC

NOAA Air Resources Laboratory  
June 15-18, 2021

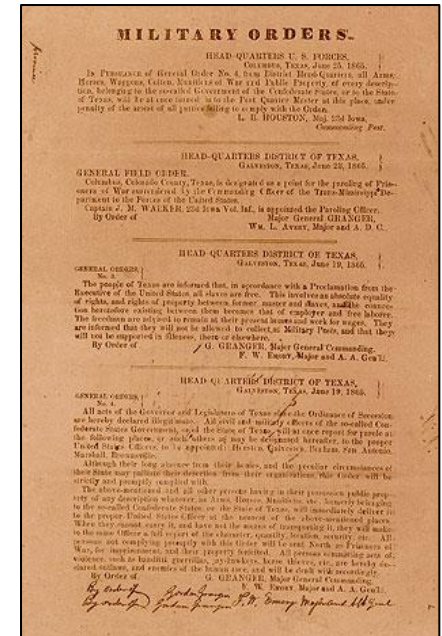
## Juneteenth

Juneteenth, celebrated on June 19, marks the date the last enslaved African Americans were granted their freedom in Galveston, TX when Union Soldiers led by General Gordon Granger delivered the order that officially ended slavery in Texas (see picture at right). This final act of liberation on June 19, 1865, came two-and-a-half years after U.S. President Abraham Lincoln issued the Emancipation Proclamation that declared that all persons held as slaves were free.

Juneteenth, also known as Freedom Day, commemorates the end of slavery in the United States, but also recognizes the delay before the last enslaved citizens in the nation were freed.

Yesterday, U.S. President Joe Biden signed the Juneteenth National Independence Day Act commemorating this day as a U.S. Federal Holiday. As June 19<sup>th</sup> falls on a Saturday this year, the holiday is granted on the Friday before, i.e., today.

We have decided to go ahead and carry out this last day of the HYSPLIT Workshop, but we do so with respect and acknowledgement of the Juneteenth holiday and all that it represents.



General Order #3,  
June 19, 1865

## **Day 4, Introduction (9:00 – 9:15)**

### **Dr. Mark Cohen, Lead Scientist, HYSPLIT Modeling Group**

- ☐ **Agenda for today**
- ☐ **Quick recap of logistics**
- ☐ **The HYSPLIT Ecosystem**
- ☐ **... And then, on to the course!**

Workshop guidance and resources posted at

[Workshop Web Page](#)

[https://www.ready.noaa.gov/  
register/HYSPLIT\\_hyagenda.php](https://www.ready.noaa.gov/register/HYSPLIT_hyagenda.php)

... this Intro presentation available as a  
Handout in Go-to-Webinar , and will  
also be put on Workshop Web Page

# Agenda – Day 1

UTC	EDT	Agenda Item
13:00 – 13:15	09:00 – 09:15	Welcome, Introduction and Logistics
13:15 – 14:00	09:15 – 10:00	1. Installing HYSPLIT
14:00 – 14:10	10:00 – 10:10	Break
14:10 – 14:50	10:10 – 10:50	2. Testing the installation
14:50 – 15:00	10:50 – 11:00	Break
15:00 – 15:45	11:00 – 11:45	3. Gridded meteorological data sets
15:45 – 16:30	11:45 – 12:30	Break
16:30 – 18:00	12:30 – 14:00	4. Trajectory calculations
18:00 – 18:15	14:00 – 14:15	Break
18:15 – 19:30	14:15 – 15:30	5. Trajectory options
19:30 – 19:40	15:30 – 15:40	Break
19:40 – 20:45	15:40 – 16:45	6. Trajectory statistics
20:45 – 21:00	16:45 – 17:00	First day wrap-up

# Agenda – Day 2

UTC	EDT	Agenda Item
13:00 – 13:15	09:00 – 09:15	Comments / questions from previous day
13:15 – 14:45	09:15 – 10:45	7. Air Concentration Calculations
14:45 – 15:00	10:45 – 11:00	Break
15:00 – 16:30	11:00 – 12:30	8. Configuring the CAPTEX simulation
16:30 – 17:30	12:30 – 13:30	Break
17:30 – 19:00	13:30 – 15:00	9. Air Concentration Parameter Sensitivity
19:00 – 19:15	15:00 – 15:15	Break
19:15 – 20:00	15:15 – 16:00	10. Alternate Display Options
20:00 – 20:45	16:00 – 16:45	11. Pollutant Transformations and deposition <i>(started this section)</i>
20:45 – 21:00	16:45 – 17:00	Second day wrap-up / questions

# Agenda – Day 3

UTC	EDT	Agenda Item
13:00 – 13:15	09:00 – 09:15	Comments / questions from previous day
13:15 – 14:15	09:15 – 10:15	11. Pollutant Transformations and deposition <i>(continuing this section from yesterday)</i>
14:15 – 14:30	10:15 – 10:30	Break
14:30 – 16:00	10:30 – 12:00	12. Air Concentration Uncertainty
16:00 – 17:00	12:00 – 13:00	Break
17:00 – 18:00	13:00 – 14:00	13. Source Attribution Methods (...first part)
18:00 – 18:15	14:00 – 14:15	Break
18:15 – 19:15	14:15 – 15:15	13. Source Attribution Methods (...continued)
19:15 – 19:30	15:15 – 15:30	Break
19:30 – 20:45	15:30 – 16:45	14. Wildfire Smoke and Dust Storms
20:45 – 21:00	16:45 – 17:00	Third day wrap-up / questions

# Agenda – Day 4

UTC	EDT	Agenda Item
13:00 – 13:15	09:00 – 09:15	Comments / questions from previous day
13:15 – 14:45	09:15 – 10:45	15. Radioactive Pollutants and Dose
14:45 – 15:00	10:45 – 11:00	Break
15:00 – 16:30	11:00 – 12:30	16. Volcanic Eruptions with Gravitational Settling
16:30 – 17:30	12:30 – 13:30	Break
17:30 – 18:30	13:30 – 14:30	17. Custom Simulations
18:30 – 18:45	14:30 – 14:45	Break
18:45 – 19:45	14:45 – 15:45	Questions and answer (Q & A) session with course instructor Roland Draxler*
19:45 – 20:00	15:45 – 16:00	Final course wrap-up

\* Participants will ask questions for the Q&A via the Go-to-Webinar “Questions” box



# Quick Recap of Logistics

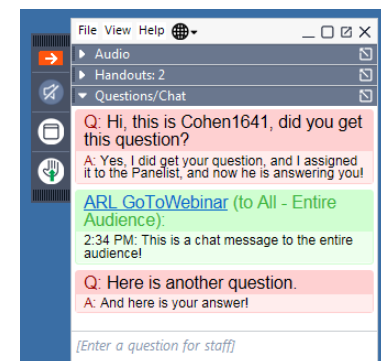
## Quick Recap of Logistics

- **General questions:**
  - use Go-to-Webinar Question box and we will do our best to answer
  - We are not using the “raise hand” feature for questions
- **Detailed questions, e.g., about the model:**
  - use the HYSPLIT Forum
  - if haven’t already, “register” in upper right corner of Forum web page
- **Event Guides:**
  - Online Event Guide and Recorded Event Guide available as Handouts in Go-to-Webinar and on the Workshop Web Page
- **Handouts:**
  - Other documents – e.g., this presentation – provided as Handouts in Go-to-Webinar and also on the Workshop Web Page
- **Recordings:**
  - Each day’s recording will be posted to the Workshop Web Page as soon as it is ready, generally 2-4 hours after the day’s session ends.


# Asking Questions

- Ask general questions about the Webinar or Go-to-Webinar in the Control Panel that was just discussed

*...if viewing a recording, can ask  
general questions by emailing  
**arl.webmaster@noaa.gov***



- Ask questions about HYSPLIT and the Tutorial in the HYSPLIT Forum







**HYSPLIT Forum: [hysplitbbs.arl.noaa.gov](https://hysplitbbs.arl.noaa.gov)**  
A Forum for HYSPLIT Dispersion Model Users to Communicate Questions, Problems, and Ideas for Upgrades, etc.

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### 2021 HYSPLIT Workshop Questions

FORUM	TOPICS	POSTS	LAST POST
 <b>1. Installing HYSPLIT</b>	1	1	<b>Installing HYSPLIT using the ...</b> by <a href="#">sonny.zinn</a>  June 8th, 2021, 1:46 pm
 <b>2. Testing the installation</b>	1	4	<b>Re: GSView requesting for ver...</b> by <a href="#">sonny.zinn</a>  June 8th, 2021, 6:24 am

# Asking Questions

If you have not already registered  
for the HYSPLIT Forum, you can  
do so easily by clicking on the  
“Register” icon at  
<https://hysplitbbs.arl.noaa.gov/>

A screenshot of the top section of the HYSPLIT Forum website. It features a blue header bar with the phpBB logo on the left, the forum name and URL in the center, and a search bar on the right. Below the header is a light blue navigation bar containing links for "Quick links", "FAQ", "Board index", "Register", and "Login". The "Register" button is highlighted with a red square.

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

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It is currently June 7th, 2020, 7:32 pm

# Asking Questions


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 Notifications **11**
[MarkCohen](#)

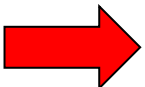
[Board index](#)


It is currently June 18th, 2020, 6:36 pm
 Last visit was: June 16th, 2020, 10:13 am
 [Mark forums read](#)

HYSPLIT	TOPICS	POSTS	LAST POST
 <b>Users</b> General questions and postings pertaining to the use of HYSPLIT regardless of the platform. For platform specific questions, use the HYSPLIT Platform forums.	190	715	<b>Re: Meteorological Data</b> by <a href="#">barbara.stunder</a> May 26th, 2020, 8:52 am
 <b>Developers</b> Questions and postings pertaining to the development of HYSPLIT, feature enhancements, and HYSPLIT internals. HYSPLIT source code and algorithms are discussed here.	19	70	<b>Trying to Recreate This image</b> by munleyj May 11th, 2020, 9:48 am
 <b>Bugs</b> Post any defects you find in the HYSPLIT software here. The HYSPLIT Developers carefully monitor this list and will work diligently to repair any reported problems. When posting a bug report, please specify both the HYSPLIT version and operating system you are using.	42	145	<b>Re: question about DATEM form...</b> by lida May 18th, 2020, 9:37 pm
 <b>Announce</b> Announcements pertaining to HYSPLIT, training materials, dispersion related jobs or research positions, or related software. This list is moderated and will not be used for any discussion.	25	47	<b>Re: TAPPAS</b> by <a href="#">alicecc</a> January 27th, 2020, 12:26 pm




 in the atmosphere. This section is also to facilitate collaborations between researchers involved in chemical transport and dispersion.			January 22nd, 2020, 3:55 am
 <b>Radiological</b> Post questions, comments and links to research (research papers, web sites, etc) involving HYSPLIT and radiological nuclides. This section is also to facilitate collaborations between researchers involved in radiological nuclide transport and dispersion.	12	38	<b>Re: Fukushima Calculation</b> by <a href="#">ariel.stein</a> September 20th, 2018, 9:25 am
 <b>Cluster Analysis</b> Topics about the trajectory clustering program for HYSPLIT.	31	133	<b>Re: Generate cluster trajecto...</b> by <a href="#">barbara.stunder</a> August 26th, 2019, 7:35 am



FORUM	TOPICS	POSTS	LAST POST
 <b>HYSPLIT Workshop</b>	17	34	<b>? Re: Moderator test</b> by <a href="#">alicecc</a> June 12th, 2020, 11:30 am

# Asking Questions






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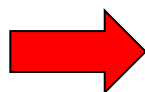
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## HYSPLIT Workshop

FORUM	TOPICS	POSTS	LAST POST
 <b>2021 HYSPLIT Workshop Questions</b>	2	5	<b>Installing HYSPLIT using the ...</b> by <a href="#">sonny.zinn</a> June 8th, 2021, 1:46 pm
 <b>2020 HYSPLIT Workshop Questions</b> Questions from the 2020 Online HYSPLIT Workshop.	88	349	<b>Re: ImageMagick version - up ...</b> by <a href="#">nobella</a> April 14th, 2021, 12:22 am
 <b>2019 HYSPLIT Workshop Questions</b> During the four weeks of the 2019 HYSPLIT Workshop, users will be able to post questions on the week's topics to this Forum and model developers will try to answer them as soon as possible.	3	5	<b>Re: Depositions calculated wi...</b> by <a href="#">ariel.stein</a> June 17th, 2019, 3:58 pm



<https://hysplitbbs.arl.noaa.gov/viewforum.php?f=57>

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






















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## 2021 HYSPLIT Workshop Questions

FORUM	TOPICS	POSTS	LAST POST
 1. Installing HYSPLIT	5	13	<b>Re: GUI stopped working</b> by cgagnon3  June 15th, 2021, 10:50 am
 2. Testing the installation	4	29	<b>Re: Mac OS Catalina: enable H...</b> by aring  June 15th, 2021, 12:21 pm
 3. Gridded meteorological data files	3	17	<b>Re: FTP failed</b> by christopher.loughner  June 16th, 2021, 4:08 pm
 4. Trajectory calculations	3	7	<b>Re: Multiple Trajectories in ...</b> by almanzav  June 16th, 2021, 4:05 pm
 5. Trajectory options	4	22	<b>Re: Map Background</b> by almanzav  June 16th, 2021, 4:03 pm
 6. Trajectory statistics	4	17	<b>Re: The cluster Analysis does...</b> by perihankurt  June 16th, 2021, 3:02 pm
 7. Air concentration calculations	2	5	<b>Re: Unable to animate GIF</b> by Fantine  June 16th, 2021, 10:50 am
 8. Configuring the CAPTEX simulation	3	13	<b>Re: #8.1 - check for release ...</b> by aleya  June 16th, 2021, 4:54 pm
 9. Air concentration parameter sensitivity	1	2	<b>Re: #9.2 Step 5</b> by christopher.loughner  June 16th, 2021, 2:19 pm
 10. Alternate display options	2	5	<b>Re: Limits of ESRI GIS export</b> by christopher.loughner  June 16th, 2021, 5:23 pm
 11. Pollutant transformations and deposition	1	3	<b>Re: CHEMRATE.TXT interpretati...</b> by stefan  June 16th, 2021, 4:45 pm



You can post your question in the appropriate section, based on where in the Tutorial your question refers to.



# Asking Questions



You can look to see if there already is a similar question, and if not, you can create a **New Topic**



**HYSPLOT Forum: hysplitbbs.arl.noaa.gov**  
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








[Board index](#) < [HYSPLOT Workshop](#) < [2021 HYSPLOT Workshop Questions](#) < [6. Trajectory statistics](#)


## 6. Trajectory statistics



**New Topic**


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TOPICS	REPLIES	VIEWS	LAST POST
 <b>The cluster Analysis does not work and does not create INFILE</b>  by perihankurt » June 16th, 2021, 6:29 am	2	35	by perihankurt  June 16th, 2021, 3:02 pm
 <b>Clustering backwards trajectories</b>  by mhoecker » June 16th, 2021, 9:19 am	1	25	by <a href="#">hyun.kim</a>  June 16th, 2021, 9:43 am
 <b>Unable to generate Control Files for Grolocation in GUI</b> by l_gillespie » June 15th, 2021, 4:30 pm	7	80	by l_gillespie  June 15th, 2021, 5:10 pm
 <b>Unable to Cleanup Working Directory?</b> by RickV » June 15th, 2021, 4:26 pm	3	37	by RickV  June 15th, 2021, 4:46 pm

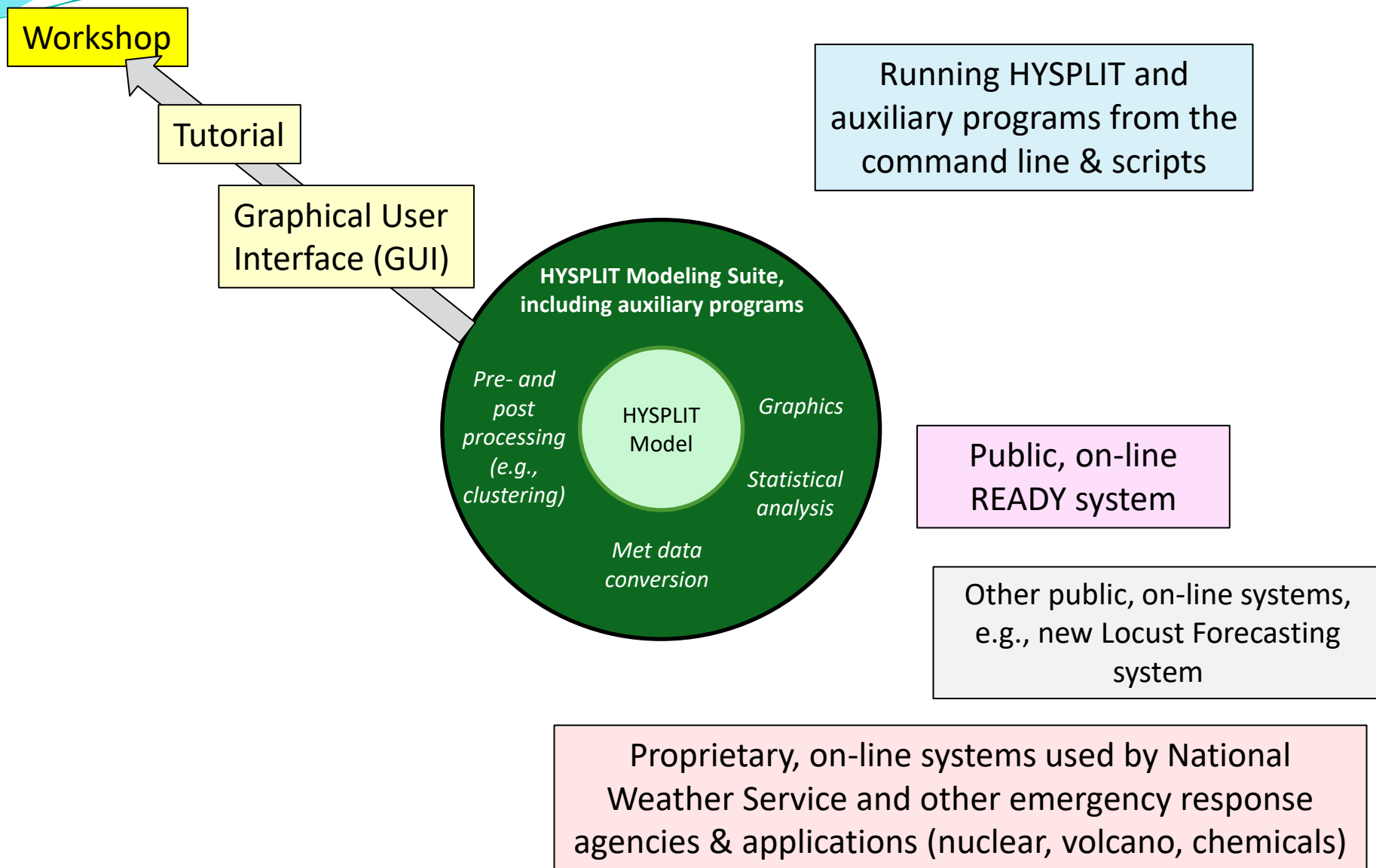
**New Topic**


4 topics • Page 1 of 1



# The HYSPLIT Ecosystem



# HYSPLIT Documentation and Learning Resources

- [HYSPLIT Tutorial](#): detailed instructions on using the GUI + example scripts; can be run online or downloaded to local computer
- The GUI is a great way to learn HYSPLIT
  - even experienced users use it when trying something new
  - can create a run in the GUI, and then look at associated input/output files to tell you how to create a script to do similar simulations
  - you can do some relatively complicated procedures (e.g., trajectory clustering)
- HYSPLIT Users Guide: [online](#) (and also in hysplit/documents directory)
- Download HYSPLIT and other resources: <https://www.ready.noaa.gov/HYSPLIT.php>
- [HYSPLIT Cheat Sheet](#)
- Model Overview: <https://www.arl.noaa.gov/hysplit/hysplit/>
- Equations: [https://www.arl.noaa.gov/wp\\_arl/wp-content/uploads/documents/reports/arl-224.pdf](https://www.arl.noaa.gov/wp_arl/wp-content/uploads/documents/reports/arl-224.pdf)
- HYSPLIT Forum: <https://hysplitbbs.arl.noaa.gov/>
- HYSPLIT FAQ's: <https://www.arl.noaa.gov/hysplit/hysplit-frequently-asked-questions-faqs/>
- HYSPLIT Training Workshop: [https://www.ready.noaa.gov/register/HYSPLIT\\_hyagenda.php](https://www.ready.noaa.gov/register/HYSPLIT_hyagenda.php)
- Stein et al., 2015: NOAA's HYSPLIT atmospheric transport and dispersion modeling system, *Bull. Amer. Meteor. Soc.*, 96, 2059-2077, <http://dx.doi.org/10.1175/BAMS-D-14-00110.1>
- Rolph et al., 2017: Real-time Environmental Applications and Display sYstem: READY. *Environmental Modelling & Software*, 95, 210-228, <https://doi.org/10.1016/j.envsoft.2017.06.025>

Course Instructor

**Roland Draxler**

NOAA Air Resources  
Laboratory (retired)

